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EDUCATION

Summer school in **Geophysical and Environmental Fluid Dynamics** DAMTP, University of Cambridge, Cambridge, U.K	Sep. 2000
Ph.D., Aeronautics (with minor in physics) California Institute of Technology	Jun. 1992
M.S., Aeronautics California Institute of Technology	Jun. 1987
Bachelor of Technology, Aeronautics Indian Institute of Technology, Madras, India	Jun. 1986

ACADEMIC AWARDS

William F. Ballhaus Prize for outstanding doctoral dissertation in Aeronautics California Institute of Technology	Jun. 1992
Darryl G. Greenamyer fellowship California Institute of Technology	Sep. 1986 − Aug. 1987
Hindustan Aeronautics Ltd award for academic excellence Indian Institute of Technology, Madras, India	Jun. 1986
National Merit Scholarship, India	Jun. 1982 − Jun. 1986

PRESENT AND PREVIOUS EMPLOYMENT

Adjunct Assoc. Professor, Department of Mathematics University of New Mexico, Albuquerque, NM	Apr. 1998 − Present
Technical Staff Member, Los Alamos Natl. Lab.	Apr. 1996 − Present
Post-doctoral Fellow, Los Alamos Natl. Lab.	May 1993 − Apr. 1996
CNRS Research Fellow, University of Paris VI, FRANCE	Aug. 1992 − Apr. 1993
Research Fellow in Aeronautics, GALCIT, Caltech	Jun. 1992 − Aug. 1992
Collaborator, Los Alamos Natl. Lab.	Sep. 1989 − Sep. 1991
Research Assistant, GALCIT, Caltech	Jun. 1987 − Jun. 1992
Research Assistant, Indian Institute of Science, Bangalore, INDIA	Apr. 1985 − Jun. 1985

SELECTED PUBLICATIONS

Global Bifurcation in a Simple Ocean Model, B.T. Nadiga & B. Luce. Journal of Physical Oceanography, **31** (2001), 2669–2690

Dispersive Eddy Parameterization in a Barotropic Ocean Model, B.T. Nadiga & L.G. Margolin. Journal of Physical Oceanography, **31** (2001), 2525–2531

Enhancement of the inverse-cascade of energy in the two-dimensional averaged Euler equations, B.T. Nadiga & S. Shkoller. Physics of Fluids, **13** (2001), 1528–1531

Four gyre circulation in a barotropic model with double gyre wind forcing R.J. Greatbatch & B.T. Nadiga. Journal of Physical Oceanography, **30** (2000), 1461–1471.

Scaling Properties of an Inviscid Mean-Motion Fluid Model, B.T. Nadiga. Journal of Statistical Physics, **98** (2000), 935–948.

Discrete-Velocity Models of the Boltzmann Equations: Navier-Stokes Approximations and Shock Profiles, C.D. Levermore & B.T. Nadiga. (preprint).

Nonhydrostatic Effects in Long Term Shallow Fluid Flow, D. D. Holm, L.G. Margolin, &B.T. Nadiga. (preprint)

Moment Realizability and the Validity of the Navier-Stokes Equations for Rarefied Gas Dynamics, C.D. Levermore, W.J. Morokoff, & B.T. Nadiga. Physics of Fluids, **10** (1998), 3214–3226.

On Simulating Flows with Multiple Time Scales Using a Method of Averages, B. T. Nadiga, M. W. Hecht, L. G. Margolin & P. K. Smolarkiewicz. Theoretical and Computational Fluid Dynamics, **9** (1997), 281–293.

Different Approximations of Shallow Fluid Flow over an Obstacle, B.T. Nadiga, L.G. Margolin, & P.K. Smolarkiewicz. Physics of Fluids, **8** (1996), 1–12.

Investigations of a two-phase fluid model, B.T. Nadiga & S. Zaleski. European Journal of Mechanics B: Fluids, **15** (1996), 885-896.

Semi-Lagrangian Shallow Water Modeling on the CM-5, B.T. Nadiga, L.G. Margolin, & P.K. Smolarkiewicz. Parallel Computational Fluid Dynamics: Implementation and Results Using Parallel Computers Proceedings of Parallel CFD'95 (1996), 529–536.

An Euler Solver Based on Locally Adaptive Discrete-Velocities, B.T. Nadiga. Journal of Stastical Physics, **81** (1995), 129–146.

An Adaptive Discrete Velocity Model for the Shallow Water Equations, B.T. Nadiga. Journal of Computational Physics, **121** (1995), 271–280.

An Exact Shock-Solution in the Nine-Velocity Gas, B. T. Nadiga & B. Sturtevant. Physica D, **73** (1994), 205–216.

A Method for Near-Equilibrium Discrete-Velocity Gas Flows, B. T. Nadiga & D. I. Pullin. Journal of Computational Physics, **112** (1994), 162–172.

Plane Waves in a Multi-Speed Discrete-Velocity Gas, B. T. Nadiga. Rarefied Gas Dynamics: Theory and Simulations, Vol. 159 of Progress in Astronautics and Aeronautics, AIAA, 1994, 313–327.

Study of a Multispeed Cellular Automaton, B. T. Nadiga, J. E. Broadwell, & B. Sturtevant. Rarefied Gas Dynamics: Theoretical and Computational Techniques, Vol. 118 of Progress in Astronautics and Aeronautics, AIAA, ISBN 0-930403-55-X, 1989, 155–170.

INVITED TALKS

Dynamical Systems and Differential Equations 2002, University of North Carolina, Wilmington, May 2002

Reduced Descriptions of Coupled GFD systems, Institute for Mathematics and its Applications, University of Minnesota, Feb 2002

Geophysical Fluid Mechanics Symposium in MATH 2000, McMaster Univers ity, Hamilton, Ontario, Canada, June 2000

Caltech Fluid Mechanics Seminar, Pasadena, CA, Feb 2000

Coarse-grained hydrodynamics Mechanical Engineering Seminar, Dept. of Mech. Engg., UNM, 1999

Fifth SIAM Conference on Applications of Dynamical Systems, Snowbird, Utah, May 1999

Institute for Applied Mathematics, Italian National Research Council, Rome, July 1998

Lab. of Dynamic Meteorology, Ecole Normal Superieur, Paris, July 1998

4th International Conf. on Discrete Models of Fluid Dynamics, Univ. of Oxford, UK, July 1998

SHOM, Oceanographic and Hydrologic Institute, Brest, France, July 1998

Institute for Geophysics and Planetary Physics, LANL, Los Alamos, NM, 2 March 1995

Fluid Mechanics Colloquim at the Indian Institute of Science, Bangalore, India, 6 Sep 1994.

Laboratoire d'Hydrodynamique, Ecole Polytechnique, Palaiseau, France, Feb. 1993

Laboratoire de Modélisation en Mécanique, CNRS, Univ. Paris VI, Paris, France, Nov. 1992.

Laboratoire de Physique Statistique, Ecole Normale Supérieure, Paris, France, Nov. 1992.

2nd International Conference on Industrial and Applied Mathematics (ICIAM), Society for Industrial and Applied Mathematics, Washington, D.C, July 1991.

Fluid Mechanics Seminar, Indian Institute of Science, Bangalore, India, Dec 1987.

OTHER PRESENTATIONS

2002 AGU Ocean Sciences Meeting, Honolulu, HI, Feb. 2002

Layered Ocean Modeling meeting, Univ. of Miami, Feb. 2002

European Geophysical Union, Nice, France, Mar. 2001

2000 AGU Ocean Sciences Meeting, San Antonio, TX, Jan. 2000

Third Annual DOE/MICS Workshop "Predictability of Complex Phenomena", Los Alamos, NM, Dec. 1999 (Poster)

52th Annual Meeting of the Divison of Fluid Dynamics (APS) New Orleans, LA, Nov. 1999.

American Geophysical Union (AGU), San Francisco, CA, Dec. 1997

50th Annual Meeting of the Divison of Fluid Dynamics (APS) Nov. 1997, San Francisco, CA

Dept. of Math and Statistics, University of New Mexico, Albuquerque

National Institute of Standards and Technology, Gaithersbury, Maryland

Annual Meeting of SIAM, Kansas City, MO, July 22 1996

48th annual meeting of the Division of Fluid Dynamics, American Physical Society, Irvine, CA, Nov. 19-21 1995

Parallel CFD '95, California Institute of Technology, Pasadena, CA, June 1995

Colorado Days, University of Colorado, Boulder, CO, 17 March 1995.

American Physical Society, Division of Fluid Mechanics, Atlanta, GA, Nov 1994.

5th International Conference on Discrete Models for Fluid Mechanics, Princeton University, Princeton, NJ, June 1994.

Workshop on High Performance Computing at NASA Goddard Space Flight Center, Greenbelt, MD, May 1994.

American Physical Society, Division of Fluid Dynamics, Albuquerque, NM, Nov 1993.

Center for Nonlinear Studies, LANL, Los Alamos, NM, Nov 1993.

Center for Nonlinear Studies, LANL, Los Alamos, NM, June 1993.

Workshop on Tropical Climate Variability, International Center for Theoretical Physics, Trieste, Italy, Aug 1992.

18th International Symposium on Rarefied Gas Dynamics, University of British Columbia, Vancouver, BC, Canada, Aug 1992.

California Institute of Technology, Pasadena, CA, Feb 1992.

Winter school on complex systems, University of Arizona, Tucson, AZ, Jan 12-24, 1992.

MSI/Stony Brook Conference on Non-Linear Analysis and Computation, State University of New York, StonyBrook, NY, Nov 1991.

44th meeting of the American Physical Society, Division of Fluid Dynamics, Scottsdale, AZ, Nov 1991.

42nd meeting of the American Physical Society, Division of Fluid Dynamics, Palo Alto, CA, Nov 1989.

NATO Advanced Research Workshop on Lattice Gas Techniques, Los Alamos National Laboratory, Los Alamos, NM, Sep 1989.

Lattice Gas Methods for Partial Differential Equations - Theory, Applications and Hardware' workshop, Los Alamos National Laboratory, Los Alamos, NM , Sep 1989.

16th International Symposium on Rarefied Gas Dynamics, California Institute of Technology, Pasadena, CA, July 1988.

40th meeting of the American Physical Society, Division of Fluid Dynamics, Eugene, OR, Nov 1987.

CONFERENCES ORGANIZED

Mini-symposium, SIAM Conference on Applications of Dynamical Systems, Snowbird, Utah, May 1997

REFEREE ACTIVITY

Refereed articles for Journal of Fluid Mechanics, Physics of Fluids, Journal of Computational Physics, Journal of Statistical Physics, Monthly Weather Review, Siam Journal on Scientific Computing, Physics Letters A, Journal of Waterway, Port, Coastal and Ocean Engineering, Transport Theory and Statistical Physics, Computers and Fluids, and International Journal of Modern Physics C.

PERSONAL INFORMATION

Born 26 Dec. '65 in India. Married; one four year old son; wife is a physician. Permanent residency in U.S (as "Alien of Extraordinary Ability".)